

# EUROPEAN PATENT OFFICE

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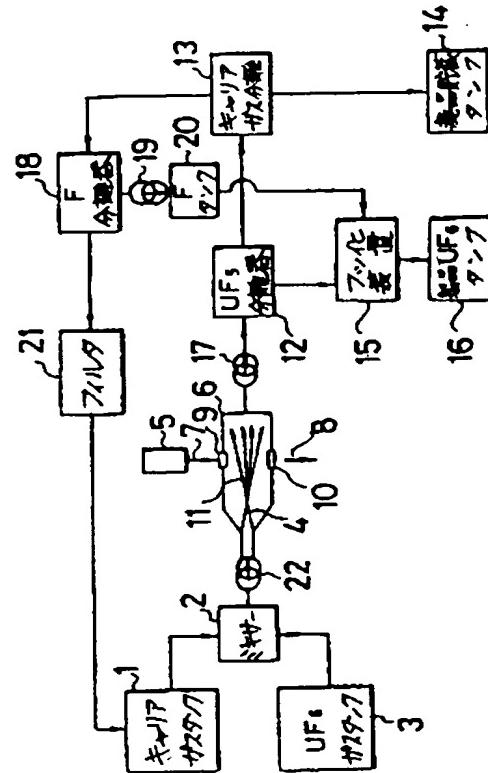
APPLICATION DATE : 27-12-84  
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TITLE : ISOTOPE SEPARATOR



**ABSTRACT :** PURPOSE: To recover products and waste materials more efficiently and to improve the operation rate by providing a solid and gas separator and the first and the second cold trap in the titled isotope separator of uranium, etc., by a laser beam.

CONSTITUTION: UF<sub>5</sub> molecules alone are separated in a UF<sub>5</sub> separator 12, and mixed with fluorine in a fluorination device 15 to form UF<sub>6</sub> which is stored in a product storage tank. Meanwhile, the other part of UF<sub>6</sub>, F, and a carrier gas separated in the UF<sub>5</sub> separator 12 are cooled in a UF<sub>6</sub> separator 13 at the next stage, and only UF<sub>6</sub> is trapped. The F and carrier gas are introduced into a fluorine separator 18. Waste UF<sub>6</sub> is heated in the UF<sub>6</sub> separator 13, and recovered in a waste material storage tank 14. The fluorine separator 18 is cooled to 50-85°K, and only the fluorine is trapped. The carrier gas is filtered by a filter 21, and fed back to a carrier gas tank 1. Besides, the fluorine is compressed by a pump 19, temporarily stored in a fluorine tank 20 and then supplied to the fluorination device 15.

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